

Water Line Cleaning and Disinfection

Contamination in poultry barn water lines is a common problem, even for the most diligent producers. Since the PVC water lines are opaque, it's impossible to see what's happening inside. Although the nipple system was revolutionary in reducing contamination from what was considered an 'open system', bacteria from the barn environment can still gradually enter the lines mainly through contact with birds' beaks. Under certain conditions—such as warm, stagnant, high-moisture environments without sanitizer—bacteria can double in numbers every 20-30 minutes. This makes water lines a perfect breeding ground for bacteria during preheating and throughout the flock's life especially in the first week when the birds are most vulnerable to infection. Therefore, it is crucial for all barns to have a well-defined water line sanitation program. This program typically involves regular cleaning and disinfection of the water lines to prevent the buildup of biofilm and harmful bacterial growth.

Steps to Water Line Cleaning In-between Flocks:

1. **Cleaning:** apply a detergent, such as Farm Foam EVO at 1-3% into the water lines, the water will foam and this will be the indicator that it is at the end of the line. Flush the medicator/pump after injection, this will take about 15 mins. Leave the detergent in the line for 24-hours. After 24-hours, flush out the detergent (drop lines to the floor to flush nipples), and start injecting with a sanitizer. Replace the Farm Foam with Acid-A-Foam once every 5-flocks if the water is not regularly acidified.
2. **Application of sanitizer:** apply a peroxide-based product into the water between 1-3%. Flush the sanitizer out of the lines within 24-48 hours of application.
3. **Application of maintenance disinfectant:** Apply a water line cleaning product - this could be a peroxide, chlorine, or chlorine dioxide based product. Peroxide should read 50ppm at the end of the line (if the reading varies significantly at the beginning versus the end of the water line, biofilm is still present). Chlorine should be injected with an acid (reaching a water pH of 6) using two separate stocks and injectors with a reading of 3-5ppm. If using an ORP meter, chlorine dioxide or chlorine water cleaners should read 650-750mV. The water line should always contain a sanitizer, even during preheating. Flush the lines daily during preheating until the flock reaches one week of age.

Key Points:

Monitor Biofilm Regularly: Periodically swab the ends of the water lines for residual biofilm, particularly if persistent issues are detected. Adjust the cleaning frequency or switch products as necessary to ensure thorough removal.

Nipple Maintenance: Nipple drinkers can continue to leak even after line cleaning. Consider replacing nipples periodically to maintain litter quality.

Water Source Quality: Annually check the well water source for contamination that could contribute to biofilm formation. Along with water cleaning and sanitation, iron filters can be very helpful in reducing pathogen challenge in poultry flocks.